



554417

(43) International Publication Date
11 November 2004 (11.11.2004)

PCT

(10) International Publication Number
WO 2004/097092 A1

(51) International Patent Classification⁷: **D04B 9/38**

(21) International Application Number:
PCT/EP2004/004475

(22) International Filing Date: 28 April 2004 (28.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
MI2003A000900 2 May 2003 (02.05.2003) IT

(71) Applicant (for all designated States except US): SAN-
TONI S.P.A. [IT/IT]; Via C. Fenzi, 14, I-25135 Brescia
(IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LONATI, Et-
tore [IT/IT]; Piazza Paganora, 5, I-25121 Brescia (IT).
LONATI, Fausto [IT/IT]; Via Mediana, 15, I-25128
Brescia (IT). LONATI, Tiberio [IT/IT]; Via Sera, 24,
I-25121 Brescia (IT).

(74) Agent: MONDIANO, Guido; Mondiano & Associati, Via
Meravigli 16, I-20123 Milano (IT).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

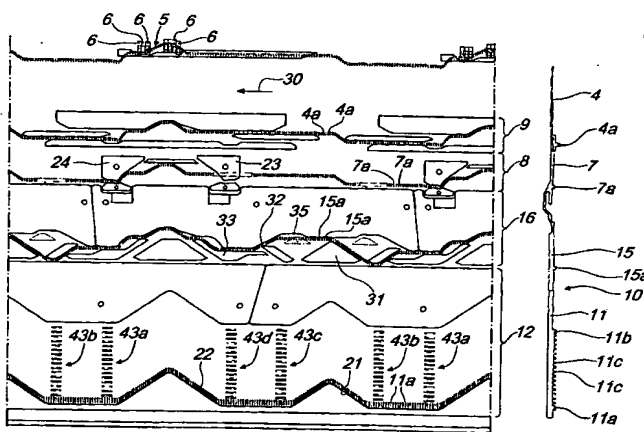
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: CIRCULAR KNITTING MACHINE, PARTICULARLY FOR PRODUCING ITEMS OF CLOTHING WITH THREE-
DIMENSIONAL SHAPES



(57) Abstract: A circular knitting machine, particularly for producing items of clothing with three-dimensional shapes, which com-
prises a footing that supports a needle cylinder (2) that can rotate about its own axis (2a), which is orientated substantially vertically
and has a diameter, substantially comprised between 7 and 24 inches, and multiple axial slots (3) formed on its outer lateral surface,
each slot accommodating a needle (4); and means (7,8,10) for actuating the needles (4), which interact with the needles (4) during
the rotation of the needle cylinder (2) about its own axis (2a) to produce the actuation of the needles (4) along the corresponding
axial slot (3) of the needle cylinder (2) so that the needles (4) form knitting with at least one yarn dispensed to the needles (4) at
least one drop or feed (5) of the machine and wherein the needle cylinder (2) can be rotationally actuated about its own axis in both
directions of rotation and the needle actuation means are suitable to allow the needles to form knitting in both directions of rotation
of the needle cylinder (2) about its own axis (2a) at at least one drop or feed (5) of the machine.

WO 2004/097092 A1